

the polypeptide has improved insecticidal activity against insects relative to a native Cry1C δ -endotoxin polypeptide.

61. The method of claim 60, wherein said polypeptide has an alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine residue for amino acid 219, and an alanine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine residue for amino acid 148.
62. The method of claim 61, wherein said polypeptide has an alanine, leucine, methionine, glycine, or aspartic acid residues for amino acids 219 and 148.
63. The method of claim 60, wherein said insect is a larvae.
64. The method of claim 60, wherein said insect is a Lepidopteran.
65. The method of claim 64, wherein said insect is *Spodoptera exigua*, *Spodoptera frugiperda*, *Trichoplusia ni*, *Heliothis virescens*, or *Plutella xylostella*.

REMARKS


The specification has been amended to recite the current history of this divisional application. With this amendment there are now 11 claims pending, namely claims 37-40 and 59-65. Pursuant to 37 C.F.R. § 1.118(a), Applicants respectfully submit that the foregoing amendments do not introduce any new material into the application. A pending claims list is attached hereto for the convenience of the Examiner.

The Commissioner is authorized to charge the filing fee to Deposit Account No. 01-2508/11792.0214.DVUS01. Should any additional fees be required for any reason relating to the

enclosed materials, the Commissioner is authorized to deduct said fees from Deposit Account No. 01-2508/11792.0214.DVUS01.

The Examiner is encouraged to call the undersigned should any further action be required for allowance.

Respectfully submitted,



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Marked-up version of the claim amendments

37. A method of killing an insect [~~cell~~], comprising providing to an insect [~~cell~~] an insecticidally-effective amount of a composition [~~in accordance with claim 32~~] **comprising a polypeptide preparable by a process comprising the steps of:**
- (a) culturing a *B. thuringiensis* EG12111 or EG12121 cell under conditions effective to produce a composition comprising a *B. thuringiensis* polypeptide; and**
- (b) obtaining said composition from said cell.**

Pending claims after amendments

37. A method of killing an insect , comprising providing to an insect an insecticidally-effective amount of a composition comprising a polypeptide preparable by a process comprising the steps of:
- (a) culturing a *B. thuringiensis* EG12111 or EG12121 cell under conditions effective to produce a composition comprising a *B. thuringiensis* polypeptide; and
- (b) obtaining said composition from said cell.
39. The method of claim 38, wherein said insect ingests said composition by ingesting a plant coated with said composition.
40. The method of claim 38, wherein said insect ingests said composition by ingesting a transgenic plant which expresses said composition.
59. A method of killing an insect, comprising providing to an insect an insecticidally-effective amount of a composition comprising a polypeptide of SEQ ID NO:59 or SEQ ID NO:61.
60. A method of killing an insect comprising providing to an insect an insecticidally-effective amount of a *Bacillus thuringiensis* Cry1C δ -endotoxin polypeptide, wherein:

the polypeptide comprises one or more amino acid mutation in the loop region between α helices 4 and 5 of domain 1; and

the polypeptide comprises one or more amino acid mutation in the loop region between α helices 6 and 7 of domain 1; and

the polypeptide has improved insecticidal activity against insects relative to a native Cry1C δ -endotoxin polypeptide.

61. The method of claim 60, wherein said polypeptide has an alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine residue for amino acid 219, and an alanine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine residue for amino acid 148.
62. The method of claim 61, wherein said polypeptide has an alanine, leucine, methionine, glycine, or aspartic acid residues for amino acids 219 and 148.
63. The method of claim 60, wherein said insect is a larvae.
64. The method of claim 60, wherein said insect is a Lepidopteran.
65. The method of claim 64, wherein said insect is *Spodoptera exigua*, *Spodoptera frugiperda*, *Trichoplusia ni*, *Heliothis virescens*, or *Plutella xylostella*.